

World News Roundup



In this photo released by the United Nations, UN Secretary-General Ban Ki-moon travels from his residence to the Secretariat Building by 'Solartaxi' a fully solar powered car on Sept 12, in New York. 'I hope that this Solartaxi, one of the alternate sources of energy, can give some good messages to the people around the world that we need to be creative, we need to be practical,' Ban told reporters as he arrived at UN headquarters. (AFP)

Science

Hackers find black hole: Hackers claim they have broken into the computer system of the Large Hadron Collider, the mega-machine designed to expose secrets of the cosmos, British newspapers reported on Saturday.

A group calling itself the Greek Security Team left a rogue webpage mocking the technicians responsible for computer security at the giant atom smasher as "schoolkids," the Times and Daily Telegraph reported.

The hackers vowed they had no intention of disrupting the experiment at the European Organisation for Nuclear Research (CERN) on the Swiss-French border, they just wanted to highlight the flaws in the computer system's security.

"We're pulling your pants down because we don't want to see you running around naked looking to hide yourselves when the panic comes," they wrote, according to the Daily Telegraph.

The hackers claimed to have gained access to a website open to other scientists on Wednesday as the LHC passed its first test with flying colours, the reports said.

They appear to have tried to gain access to the computer system of the Compact Muon Solenoid Experiment, one of the four detectors that will be analysing the progress of the experiment.

James Gillies, a spokesman for CERN, told the Times: "We don't know who they were but there seems to be no harm done. It appears to be people who want to make a point that CERN was hackable."

Scientists hailed the success of the start of the experiment on Wednesday in the Large Hadron Collider, the 27-kms (16.9-mile) circular tunnel in which parallel beams of protons will be accelerated to nearly the speed of light.

Superconducting magnets will then steer the counter-rotating beams so that strings of protons smash together in four huge laboratories, fleetingly replicating the conditions that prevailed at the "Big Bang" that created the Universe 13.7 billion years ago. (AFP)

Ban sees ride 'fantastic': Secretary-General Ban Ki-moon called his first solar-powered taxi ride "fantastic" and urged more innovations to tackle climate change.

The UN chief arrived at UN headquarters Friday in the solar-powered car that is making its way around the world. It will conclude its journey at the next round of climate change talks in Poznan, Poland in December.

He thanked Swiss adventurer Louis Palmer, who has already driven about 40,000 kms (25,000 miles), for the initiative.

"I hope that this solar taxi, one of the alternate sources of energy, can give some good messages to the people around the world that we need to be creative, we need to be practical," Ban told reporters after stepping from the vehicle.

"Personally, this is a fantastic experience," he said. "I hope I can enjoy another ride."

Ban said his ride was also timely because he was going to have a videoconference with three key presidents dealing with climate change talks — Indonesian President Susilo Bambang Yudhoyono, Polish President Donald Tusk and Danish Prime Minister Anders Fogh Rasmussen.

The secretary-general has made the signing of a new global agreement to curb global warming by December 2009 a top priority. (AP)

Hopes for space solar power: A former Nasa scientist has used radio waves to transmit solar power a distance of 92 miles (148 kms) between two Hawaiian islands, an achievement that he says proves the technology exists to beam solar power from satellites back to Earth.

John C. Mankins demonstrated the solar power transmission for the Discovery Channel, which paid for the four month experiment and will broadcast the results Friday at



Fishermen carve up a baby whale on the shore of the Atlantic ocean in Ibeshe, a remote island off the coast of Lagos in south-western Nigeria. Sept. 11. The whale drifted to shore and was killed by the fishermen. (RTRS)



Gary



Ambros

Awards presented

The Japanese scientist who discovered the first cholesterol-lowering statin drug was named on Saturday as one of five recipients of the Albert Lasker Medical Research Awards, sometimes dubbed "America's Nobels."

Joining Akira Endo in getting awards were Stanley Falkow for his insights on disease-causing microbes and Victor Ambros, David Baulcombe and Gary Ruvkun for discovering the tiny RNAs that regulate gene function and are involved in many diseases.

The 74-year-old Endo, of Biopharm Research Laboratories Inc in Tokyo, developed the first statin in the 1970s, setting off a revolution in prevention and treatment of heart disease that would make statins the world's best-selling drugs.

Statins lower the risk of heart attack or stroke by reducing levels of triglycerides and fatty substances such as low-density lipoprotein, also known as LDL, or "bad" cholesterol. They also raise levels of high-density lipoprotein — HDL or "good" cholesterol. (RTRS)

9 pm EDT. His vision is to transmit solar power collected by orbiting satellites as large as 1,102 pounds (500 kg) to lake-sized receiver stations on Earth.

Mankins, who worked at Nasa for 25 years and managed the agency's space-based solar program before it was disbanded, transmitted 20 watts of power between the two islands in May. The receivers, however, were so small that less than one one-thousandth of a percent of the power was received, Mankins said.

The experiment cost about \$1 million, and Mankins said larger arrays could be constructed with more money.

Energy

'It was an idea whose time had come'

Internet IC marks 50 years

SAN FRANCISCO, Sept. 13, (AFP): The computer chip industry on Friday celebrated the 50th birthday of the integrated circuit, a breakthrough that set the stage for the Internet and the Digital Age.

A half-century ago a young engineer named Jack Kilby first demonstrated an integrated circuit he designed while working through the summer at his Texas Instruments job because he didn't have enough vacation time for a holiday.

Kilby used a sliver of conductive germanium to connect a transistor and other bits, dubbing the soldered assembly an "integrated circuit" (IC).

Engineer Robert Noyce was designing his own IC "in parallel" at Fairchild Semiconductor but didn't debut his creation until about six months later. Noyce went on to found US chip making giant Intel in 1968.

While Kilby was the first to demonstrate an IC, Noyce came up with a design that could be mass produced, according to Leslie Berlin, project historian for Stanford Silicon Valley Archives and author of a book about Noyce.

"It was an idea whose time had come," Berlin told AFP. "There were efforts all over the world to make something like an integrated circuit."

History gives Noyce and Kilby shared credit for inventing the circuit that transformed the world of electronics.

"The IC was an idea so revolutionary, so life-changing, we don't even remember the world before it came along," Texas Instruments chief executive Rich Templeton said at a ceremony honoring Kilby.

"And we can't imagine life without it."

The year Kilby demonstrated his circuit, computers were colossal machines that filled rooms and were commanded by coded punch cards.

Televisions featured black-and-white pictures and few channels. The only telephones were wired in place. There were no iPods, flat-screen televisions, Internet searches or laptop computers.

Integrated circuits replaced vacuum tubes; bulky bulbs that guzzle electricity, spew heat and burn out.

The circuits became building blocks for microprocessors, the increasingly powerful and compact chips that are the brains behind the Internet and most of today's "smart" electronic devices.

"It's been only 50 years, but think of the dramatic improvements in everything we do around the world today," Intel spokesman Bill Calder told AFP.

"In the scheme of inventions, certainly the integrated circuit has to be one of the greatest inventions of our time. This world of bytes we live in today would not be possible without them."

Berlin says that integrated circuits are at the core of the microchip industry mantra of "smaller, faster, cheaper" and

can likely be found in anything with an on-off switch.

Kilby was awarded a Nobel Prize in physics in 2000 for his invention. It is believed a Nobel Prize would have also been given to Noyce, who died in 1990 at the age of 62. Kilby was 81 when he died in 2005.

"The integrated circuit has proved to be the single most important driver of increased productivity and economic growth in history," said Semiconductor Industry Association president George Scalise.

"The integrated circuit provides the critical technology for countless electronic devices that enable people everywhere to lead more productive lives."

The semiconductor industry is on track to post \$265 billion in sales this year, according to Scalise.

Templeton described Kilby as quick to credit successors for turning integrated circuits into the power driving Internet Age technologies.

It is said that Kilby responded to people making "a big fuss" over his work by quoting fellow Nobel Prize winner Charles Townes:

"When I hear that kind of thing, it reminds me of what the beaver told the rabbit as they stood at the base of Hoover Dam: 'No, I didn't build it myself, but it's based on an idea of mine.'"

Texas Instruments is planning a new research center to be christened "Kilby Labs."

Each of the nine solar panels used was built to transmit about 20 watts of power, but the transmission was scaled back to two watts per panel in order to obtain US Federal Aviation

Administration approval for the test.

Despite the minuscule reception on the receiving end, Mankins said the ground-based test proved it is possible to transmit solar

power through the atmosphere.

"The test was in no way fully successful," he said. "I think it showed it is possible to transmit solar power quickly and affordably."

'Mexican'

Space agency backed

MEXICO CITY, Sept. 13, (AFP): A US astronaut of Mexican origin, part of the crew for an Atlantis Space Shuttle voyage in July 2009, presented a project for a Mexican space agency to senators here Friday.

Astronaut Jose Hernandez promoted the plan, including a launch base in the Yucatan Peninsula on the Atlantic Coast, approved by the lower house in 2007 and due to be voted on by the senate before the end of the month.

If approved, the agency will begin operations in March next year.

"The idea is to copy what has been done in the 43 countries with space bases, modelled on NASA, but on a much smaller scale," Fernando de la Pena, one of the researchers behind the project, said on television Friday.

The Mexican space agency will be known as AEXA and include an underwater base.

Energy

Program helps

Fishermen turn junk into power

BOSTON, Sept. 13, (AP): When fishing gear is lost off boats, it's not really gone. In webs and rolling clumps, the nets, ropes and traps endure for decades as destructive artifacts of the fishery, suffocating life on the ocean floor, snaring fish and twisting into propellers.

But this "derelict gear" might actually be able to do some good. A program introduced in New England this year aims to clean the ocean by collecting everything from nylon nets to wooden lobster traps and burning it to generate electricity.

Fisherman Frank Mirarchi says he spends hours untangling discarded gear from his nets. It can be dangerous if heavy pieces snap free of the net.

Getting it out of the ocean is essential, he said.

Turning it into electricity is a bonus.

"It's fabulous," said Mirarchi, a 64-year-old who's been fishing for 46 years. "Right now, anything we can do to avoid burning foreign oil makes me feel pretty good, actually."

The "Fishing for Energy" program accepts various types of gear to be burned, including different plastic lines and nets. It recycles metal equipment such as rollers and chains used on draggers.

No one really knows how much of the gear is left in the ocean after being snared, discarded or abandoned, but it's significant. Mirarchi kept track one year and pulled up 5,000 pounds (2,268 kilograms) of marine junk on his boat alone.

The program, which started three years ago in Hawaii, is part of a partnership that includes local ports, the energy-from-waste company Covanta, the National Oceanic and Atmospheric Administration, the National Fish and Wildlife Foundation and Schnitzer Steel.

It began in Hawaii to retrieve gear that was damaging coral reefs and entangling wildlife and has since collected more than 31 tons of the debris there, said Sarah Morison of NOAA's Marine Debris Program.

Covanta decided to expand the program to the mainland, starting in New England this February. The company provides 30-yard containers at different ports where fishermen can dump the gear at no cost. It then collects and burns the gear for power at a nearby company incinerators, which are equipped with emission control scrubbers that remove pollutants that otherwise would be released when the plastics and other material used in the gear are burned.

Since February, the program has collected 47 tons of gear in New England, including 20 in New Bedford. The Fairfield, New Jersey-based Covanta estimates one ton of the marine debris can provide 25 days of power to a house.

Permanent containers are in place in New Bedford, Chatham and Scituate and will soon be installed in Newport, Rhode Island, said Christine McCoy, director of Covanta's external affairs. The program has also held single-day gear collections in Gloucester, Brookhaven, New York, and Barnstable.

McCoy said the company plans to expand to Cape May, New Jersey, in October, and is working to bring the program to Virginia, Florida and Oregon. In the next year or so, the company aims to have "Fishing for Energy" in at least 30 ports around the country.

Covanta pays transportation costs and estimates disposal costs of \$140 a ton. McCoy said the company doesn't expect to make a profit from the work, but considers it a profile-raising and worthwhile effort.

Bonnie Spinazzola of the Atlantic Offshore Lobstermen's Association said "Fishing for Energy" works for her group by collecting gear they are being forced to throw away.

By next year, lobstermen must switch from floating rope to rope that sinks to the ocean floor as part of a mandate to prevent rare right whales and other marine mammals from being snagged in their lines. That means tossing untold tons of rope — Spinazzola said there's 40 to 60 miles of rope on each offshore vessel.

But disposing of it is difficult and expensive, and until now there was no easy way to do it, she said.

"It's huge, we're very excited," Spinazzola said. "Not only are we disposing of it properly, but it's an extremely responsible method."

Spinazzola's enthusiasm must be broadly shared for the voluntary program to work. Mirarchi said it's easy for a busy fisherman to toss the gear back in, though he said he never did for ethical reasons. Now it should be easy to just bring it in.



Steel